

Calculating Momentum

Name: _____ Date: _____

Group: _____ Section: _____

1) What is momentum?

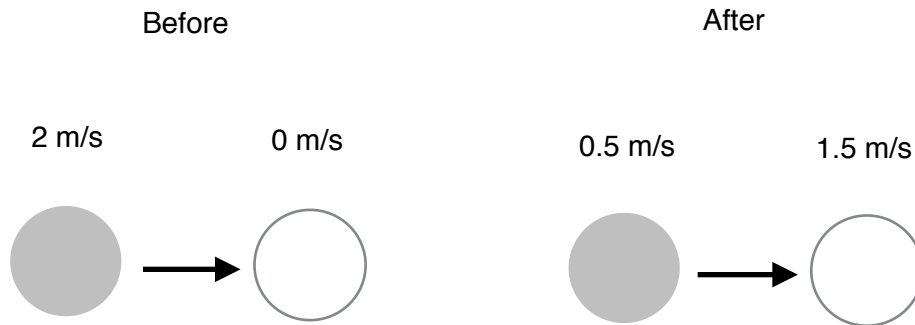
2) How do we calculate momentum?

3) Which has more momentum: a 3.0 kg sledgehammer swung at 1.5 m/s, or a 4.0 kg sledgehammer swung at 0.9 m/s?

4) A golf ball travels at 16 m/s, while a baseball moves at 7 m/s. The mass of the golf ball is 0.45 kg and the mass of the baseball is 0.14 kg. Which has greater momentum?

5) What is the momentum of a bird with a mass of 0.018 kg flying at 15 m/s?

The illustrations below are two balls moving toward a collision. Assume the mass of each ball is 0.4 kg.



6) Calculate the momentum of each ball before and after the collision.

7) Find the total momentum before and after the collision. Is the law of conservation of momentum satisfied in this collision? Give evidence to support your answer.